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ABSTRACT

This study investigates whether the racial composition of classes attended by black students has differing effects on their academic performance under different conditions. Specific variables examined are friendship patterns with whites, characteristics of white peers, and characteristics of the black students themselves. Also examined is the relationship between racial composition of high school classes and academic performance for those students in different curriculum programs and for those who attended elementary school classes with varying racial composition. The authors report that the results show little support for the hypothesis that interracial contact will benefit blacks academically when they are placed with white students of higher academic attainment. The association between interracial contact and academic outcomes for blacks is reported not to differ appreciably for those with differing amounts of friendship with whites, for those who attended grade schools with a different racial composition, or for boys as compared to girls. However, it is reported that placement in largely white classes appears to benefit those black students whose black peers are not academically oriented, and those whose white peers' parents and whose own parents had little education. The authors attribute this to the possibility of different expectations and demands from teachers. (Author/WP)

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ACADEMIC PERFORMANCE OF BLACK HIGH SCHOOL STUDENTS UNDER DIFFERENT CONDITIONS OF CONTACT WITH WHITE PEERS

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Abstract

Title: Academic Performance of Black High School Students Under Different Conditions of Contact with White Peers

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This paper investigates whether the racial composition of classes attended by black students has different effects on their academic performance under different conditions. Specifically, the relationship between class racial composition and academic performance is examined for black high school students as their friendship with whites varies and as the characteristics of white peers (academic values, I.Q. level, parents' education) and the characteristics of the black students themselves (I.Q., parents' education, sex) vary. The relationship between racial composition of high school classes and academic performance also is examined separately for those in different curriculum programs and for those who attended grade school classes with varying racial compositions.

Data were obtained from almost 2,000 black students and over 2,000 white students in all eleven public high schools of Indianapolis. Performance measures include students' grades and scores on standardized achievement tests (from school records) and a measure of effort based on information (e.g., time spent on homework) provided by students on questionnaires. Other data also were obtained from school records or from questionnaires.

The results show little overall support for the hypotheses that interracial contact will have more positive effects on academic outcomes for black students when white peers have high academic values; when white peers come from well-educated families; or when the initial academic ability (I.Q.) of white peers is roughly equal to that of the blacks. The association between interracial contact and academic outcomes for blacks also did not differ

appreciably for those with differing amounts of friendship with whites; for those who attended grade schools with different racial compositions; or for boys as compared to girls.

However, being in predominantly white classes appeared to benefit those black students whose peers were not academically oriented (i.e., those whose black peers had low academic values and those in the General program) and those whose white peers' parents and whose own parents had little education. These results are contrary to the general thinking in the literature that contact with white students will benefit black students because of the middle-class background and high academic values of white students. The fact that black students whose peers were from low-status families and had low academic values did better in mostly-white than in mostly-black classes may be due to different kinds of expectations and demands from teachers in these two types of settings.

Variations in the racial composition of schools and classes generally have been found to have only small and inconsistent effects on the academic achievement of black students (St. John, 1975). However, a number of writers have argued that it is not mere physical mixing of the races, but the circumstances under which interracial contact takes place that may be crucial (e.g., Pettigrew, 1969; Katz, 1968; St. John, 1975; Spady, 1976). Circumstances which have been said to be important include the social background and values of students of each race, the initial academic abilities of students of each race, and the degree to which black students are socially accepted by the whites.

However, evidence is sparse concerning the extent to which the academic effects of interracial contact do, in fact, differ as these circumstances vary. Moreover, there has been very little evidence concerning the ways in which various combinations of such circumstances may condition the impact which interracial contact has on the academic performance of blacks.

In this paper, we present evidence bearing on these issues from a large-scale study of interracial contact in all of the public high schools of Indianapolis, Indiana. We limit our attention to academic outcomes for black students, although evidence for white students also has been obtained as part of our total study.[1]

First, we discuss some of the circumstances which may condition the relation between interracial contact and minority performance. In doing so, we review the relevant literature briefly and state propositions to be tested.

Social Acceptance. One major idea running through a number of discussions on this topic is that contact with the white majority will raise the achievement of minority students only when the minority is socially accepted

(Katz, 1968;Gerard and Miller, 1975; Spady, 1976; Cohen et al., 1972; Lewis and St. John, 1974). When minority students have good social relations with the white majority, it is argued, they will be more likely to accept the majority as a reference group. This may involve accepting the presumably more pro-academic norms of the majority; and/or learning effective school behavior from majority role models; and/or accepting whites as a group against which to compare their achievement. Social acceptance also has been seen as reducing "social threat" and anxiety, which may interfere with intellectual functioning.

Evidence concerning the actual effect of social relationships between the races on student achievement is limited. Analysis of the EEOS ("Coleman") data showed that black students' achievement was higher in desegregated schools where teachers reported no racial tension, and that verbal achievement was higher among black students who had a close white friend (U.S. Commission on Civil Rights, 1967). Several more recent studies (Lewis, 1971; Narot, 1973; Gerard et al., 1975) support the notion that there is a joint effect between racial proportions and social climate as these affect minority student achievement. However, their results do not, on the whole, support the expectation that a combination of being in a primarily-white setting and having friendly relations with the whites will raise achievement. In general, blacks' achievement in these circumstances was about what it was in majority-black settings. However, there appears to be a decrease in the achievement of minority students when they are placed in majority-white settings in which the white majority rejects them socially.

In the present study, we will examine the possible joint effects of class racial composition and friendship with whites on several aspects of black students' academic performance. Moreover, we will see whether such

joint effects depend on other relevant variables, including the academic values and the parental education of white peers. Previous studies provide almost no evidence on whether the impact of social acceptance varies with the characteristics of the white students or of the black students who come into contact.

Academic Values of White Peers. As we have noted, the expectation that black achievement will be raised in majority-white settings is based, in part, on the assumption that black students will be influenced in such settings by whites who place a high value on academic success and demonstrate such values with a high level of academic effort (e.g., Katz, 1968; Spady, 1976). Thus, positive effects should not occur if the white majority does not value academic success highly. There has been, to our knowledge, no evidence bearing directly on this issue. In the present study, we will test the proposition that any positive effects for blacks of being in predominately white classes, or of being friends with whites (or any combination of these two factors) will be stronger when white peers place high value on academic success.

Relative Ability of White Peers. The initial academic ability of a black student, relative to the ability of his white peers, should affect his ability to compete with these schoolmates and thus his expectancy of being able to do well at his studies (Atkinson and O'Connor, 1963; Katz, 1968; St. John, 1975). The minority student who has developed his academic skills relatively well may feel challenged and stimulated to greater effort by being placed in a primarily-white class, where the level of performance usually is above that of the primarily-minority class. On the other hand, the minority students whose basic academic skills are low may see little hope of competing successfully in the majority-white class and, therefore, may stop trying.

Again, the available evidence is limited. Several studies reviewed by St. John (1975:111-117) found inconsistent results concerning the effects of desegregation on black students with different initial ability levels. In another study of particular interest, Gerard et al. (1975) first categorized minority (black and Mexican-American) children into those above and those below the median in predesegregation verbal achievement. Their assumption was "that a child above the median would be more likely to perceive himself as having a higher probability of academic success than would a child below the median" (p. 233). The Gerard group found that the achievement of low-ability minority students did not change following desegregation. However, contrary to their expectation of an achievement gain among the high-ability minority students, the achievement of this group actually declined. This drop in achievement was greatest among those who were not accepted by the "Anglos," but even high-ability minority students who were socially accepted did not improve in achievement.

In the present study, we present additional evidence concerning whether the effects of interracial contact on black students' performance varies for blacks of different ability levels. Going beyond previous studies, we look not only at variations in black students' abilities, but simultaneously at variations in the ability of their white peers, and in the racial composition of their classes. The general expectation derived from the theory of achievement motivation is that, in addition to the effect of I.Q. on the black student's performance, there will be a joint effect of his own ability and the average ability of his white peers. Those black students whose ability is about on a par with their white peers would be expected to do better than those whose ability was considerably below that of white peers. This effect would be expected to occur more strongly as the proportion of whites in classes increases.

It should be noted, however, that the negative effects on black students' motivation of having white peers with higher ability than their own may be counteracted by the likelihood that high-ability white peers also will tend to have high academic values. To take account of this complexity, we will need to control for the academic values of white peers when looking at the effect of their relative ability, and vice versa.[2]

Social Class of Students. Discussion of the impact of school peers on students' performance, both in racially integrated and other settings, often have focused on the social class of the students involved. It has been suggested by some that black students will benefit from attending school with white peers who are of higher socioeconomic status, because middle class whites are most likely to manifest the academically-oriented values and behaviors which lower SES black students may then adopt (e.g., Pettigrew, 1968; St. John, 1975; Spady, 1976). On the other hand, some writers have pointed out that contact with peers of higher status may have two separate and conflicting effects on lower-status students. On the one hand, there may be the positive normative and/or role model effect just described. On the other hand, contact with peers who are generally higher in academic ability may lower the academic self-image of the student and his expectancy of being able to compete successfully with his peers, and therefore lower his motivation. These normative and comparative effects may tend to cancel each other out (Plin and Anderson, 1974; Nelson, 1972; St. John, 1975).

There is only limited evidence about whether the effect of interracial contact on the performance of black students varies with the SES of white peers or with their own SES. Analysis of the EEOS ("Coleman") data by McPartland and York (1967) indicated that the benefit to blacks of being in majority-

white classrooms was greater when the SES of the whites was high. Their analysis indicated too that black students with better-educated parents benefitted more academically from contact with whites than did lower SES blacks. In another relevant study, Lewis and St. John (1974) stratified majority-white sixth grade classes by socioeconomic status. They found that friendship with whites was associated with higher black achievement in middle-class schools, but not in working-class schools (though only among black girls).

In the present study, we pursue in greater depth than in previous studies the question of whether the effects of interracial contact vary with the SES of students (using parents education as the most salient aspect of SES). Since the effects on a black student's performance of the family education of his white peers may depend on the student's own family's education, we consider the possible joint effects of these variables. Moreover, since the possible effects of the family background of white peers may vary also with the racial composition of black students' classes and with the extent of their friendships with whites (Spady, 1976), we consider the possible joint effects among all four variables together. In view of the possibly conflicting effects on achievement of contact with those of higher status, we make no predictions about any joint effects of the black students' own parents' education and those of white peers. However, we did expect any effects of education of white peers' parents (either absolute or relative) which did appear to be strongest among blacks in classes with high proportions of whites and among those who had white friends.

Other Conditions Affecting the Impact of Interracial Contact. In addition to the factors discussed above, we consider several other factors which may condition the relation between interracial contact and the academic performance

of blacks. These are the student's sex, the racial composition of grade school classes, and the academic program in which the student is enrolled.

Sex. Several studies have indicated that the relationship between interracial contact and black students' performance differs for boys as compared to girls (Lewis and St. John, 1974; Narot, 1973). Interracial attitudes between blacks and whites in schools also have been found to vary for the two sexes (Carithers, 1970; St. John, 1975). In view of these findings, we wished to see whether the relationship between interracial contact and black students' academic performance differed for boys and girls, and whether such sex differences (if any) occurred for those with varying degrees of friendship with other-race schoolmates.

Interracial Contact in Grade School. It has sometimes been suggested that attending racially mixed schools will have the greatest academic benefits for younger students. There has been some evidence of small gains in black achievement when racial integration occurred in the early grades but this evidence has been limited and not consistent (Coleman et al., 1966; Brown, 1974; St. John, 1975). It could be argued that greater interracial contact in high schools (where our study was conducted) comes too late to affect the academic performance of black students, since their abilities, work habits, and motivation may have become relatively "set" by the time they entered high school. If this is so, black students who attended mostly-white grade schools would be expected to do better in high school than would those who attended mostly-black grade schools. Moreover, the positive effect of much interracial contact in high school might be expected to be greater among those who had much interracial contact in grade school, and vice-versa. The subject of the possible joint effects of class racial composition in grade school and in high school has

received little or no investigation. Our analysis includes an examination of this subject.

School Program. It is possible that black students in some academic programs will be influenced more by interracial contact than will those in other programs (e.g., college preparatory vs. general program). This might occur because of differences in the academic motivation of students in different programs or because of differences in the difficulty level of courses, or because of other differences among programs. We, therefore, investigated whether the relationship between interracial contact and black students' achievement differed for those in different academic programs.

METHODS AND DATA

The data were obtained in eleven public high schools of Indianapolis, Indiana, primarily in the Spring of 1971. One of the schools was divided into two geographically separate sites, making a total of twelve school sites. The racial composition of these twelve sites ranged from 99 percent white to over 99 percent black. Between these extremes, the percentages of blacks in each student body were (approximately): 9, 14, 14, 27, 35, 37, 37, 53, 54 and 71.

Data were obtained from student questionnaires and from school records. The questionnaire data were obtained from a sample of students selected systematically from enrollment lists at each school. In each class (freshman, etc.), a sample of about 60 students of each race was selected, with the sampling fraction varying with the N of the class. In the few cases where there were fewer than 60 students of a given race in a given class, all students in that category were included in the sample.

Questionnaires were administered in two parts - each on a separate day - in group sessions in a large room in each school. The questionnaires were administered by one of the investigators and his assistants - composing a bi-racial team. Students were assured that their answers would be confidential.

Of the total number of black students selected in the sample, 75.1 percent (N=1,986) acceptably completed Part I of the questionnaire; 74.4 percent (N=1,969) acceptably completed Part II; and 66.9 percent (N=1,769) acceptably completed both parts. Among white students, the comparable rates and numbers for acceptable completion are: Part I, 82.8 percent (N=2,347); Part II, 80.9 percent (N=2,292); both parts, 75.7 percent (N=2,146).

Data on the racial composition of classes were computed from school records. Student I.Q. scores, grades, and scores on standardized achievement tests were obtained from school records.

Following is a brief description of the measures used in this analysis. (Where data come from the questionnaire, Q. 1 and Q. 2 indicate whether it was from the first or second part.)

A. Academic Values and Performance

1. Expressed Importance of Academic Goals (Q. 2). Sum of student's ratings of how important to him were the following: my getting good grades; my getting a good education; my being able to go to college (very important, fairly important, not too important).

2. Effort Toward Academic Goals (Q. 1). Estimated amount of time the student spent on homework during the semester (based on his report of time spent daily), minus estimated time lost from academic work during the semester as a result of being absent from school, being late to class, missing a class without permission, not completing assigned homework, and being called to a

disciplinary "conference" with a teacher. Information about the frequency of these events was obtained from the student.

3. Current Semester Grades. A score was assigned to each letter grade. Each score was weighted by the number of credits given for the course. Final grades were obtained at the end of the semester in which data on interracial contact were obtained.

4. Achievement Score. A composite score derived from student's scores on eleven tests of the Metropolitan Achievement Test battery (Durost et al., 1964). The percentile scores, based on national norms, first were converted to stanine (normalized) scores to make the scores for different tests more comparable. An average stanine score in each of the four major subject areas (Language, Social Studies, Mathematics and Science) was then computed and, finally, an average score for all four subject areas was computed.

Students took achievement tests toward the end of their Sophomore year of high school. Students who were Freshmen at the time of our questionnaire administration took achievement tests the following year and these scores were made available to us. Achievement scores were used in these analyses only for students who were Freshmen or Sophomores at the time questionnaires were administered. Juniors and Seniors are omitted primarily because their achievement was measured one or two years prior to the measurement of their interracial contacts in high school.

B. Interracial Contact

1. Racial Composition of High School Classes. From school records we computed the proportion of black students in each class for which credit was given during the Spring 1971 semester (e.g., English 1, 2nd Period, School 1).

Then the average racial composition in the classes attended by each student was computed.

2. Friendship with Whites (Q.1, Q.2). A Guttman scale was constructed with the following scale positions: 1) says no white students or only one or two whites are "friends of yours"; 2) says three or more white students are "friends of yours"; 3) says that the "group of friends...with whom you hang around a lot, or with whom you do things pretty often" is bi-racial; 4) says that one or more of his five best friends is white. [Categories 3 and 4 were combined for these analyses.][3]

3. Racial Composition of Grade School Classes (Q.2). Student was asked to list every grade school he/she attended and the grades attended at each. Then, for each school, the student was asked to check one of six categories showing the racial proportions in his classes. A score was computed for each student by averaging the racial composition scores of classes in all grade schools he/she attended, weighting the score for each school by the number of years attended.

C. Black Student's Own Characteristics

1. I.Q. Scores. For most black students (93.4 percent), scores were obtained from the California Test of Mental Maturity taken during the eighth grade. For a small proportion of students, scores were obtained from this or another I.Q. test taken during the sixth grade (1.9 percent) or during the ninth grade (4.7 percent).

2. Sex. Reported by student on the questionnaire, and checked against school records.

3. Parent's Education (Q.2). Student's report of amount of education of each parent or other adult with whom student was living, on a six-point scale.

Score was average education of both parents; or, if one parent, the education of that parent; or, if living with other adult(s), the average education of these parent-substitutes.

4. Academic Program (Q.1). Juniors and Seniors were enrolled in one of four high school programs: 1) Academic (college-preparatory); 2) General; 3) Practical and Fine Arts; 4) Vocational. (Separate diploma programs had been discontinued, starting with the Sophomore class.)

D. Characteristics of White Peers

Juniors and Seniors were in most frequent contact with those in their own academic program. Therefore, for black Juniors and Seniors, we defined their white peers as those whites in the same program in the same school. Among Freshmen and Sophomores, some courses were divided into different ability groups. For black students who were in all average-ability classes, we defined their white peers as whites in the same year and school who also were in all average-ability classes. The minority of black lower-classmen who were in one or more slow (or accellerated) classes were not given scores with respect to the characteristics of their white peers, since the characteristics of these peers were likely to differ for their "special" as compared to their average-ability classes.

The following measures were computed for each black student's white peers:

1. Average parent education, white peers (Q.2).

2. Average I.Q., white peers.

3. Average Expressed Academic Values, White Peers (Q.2). The same measure of expressed academic values used for black students (see above) was used for whites.

4. Average effort, white peers. The same effort measure which was used for black students (see above) was used for white peers.

D. Characteristics of Black Peers

For each black student, several characteristics of his black peers also were computed. These included their average I.Q., the average education of their parents, and their average academic values. Black peers were defined in the same way as white peers and scores for black peers were computed in a parallel way.

RESULTS

To investigate the relationships discussed, we conducted a series of analysis of covariance. One factor used as a predictor in all of these analyses was the racial composition of student's classes. In previous analyses of these data, we related class racial composition to students' effort, grades, and achievement scores (Patchen et al., 1977). These results indicate that it is useful to divide students into three categories based on their class racial composition: 0-34.9 percent black; 35.0 - 54.9 percent black; and 55.0 - 85.0 percent black. Students whose classes averaged over 85 percent black were omitted from these analyses because previous analyses indicated that their academic performance differed from that of other blacks in majority black classes.[4] They could not be treated as a separate category since their small numbers and the fact that they had few contacts with whites would have resulted in few or no cases in some cells of the analyses.

Values of White Peers. Our first set of analyses bears on the hypothesis that attending mixed classes will benefit the performance of black students when their white peers have high academic values (especially when the blacks and whites are friends).

In these analyses, the academic values, effort, grades, and achievement scores of blacks were related, in turn, to three factors. The first factor was the average proportion of blacks in classes (0 - 34.9; 35.0 - 54.9; 55.0 - 85.0). The second factor was friendship with whites, which was divided into three categories (low, medium, high), based on the scale values of this measure (see above). The third factor was the average expressed academic values of white peers. This factor was divided into three categories (low, medium, high) by dividing white peer groups into three approximately equal groups. The effects of the three factors on academic performance were controlled for the effects of students' I.Q., sex, parents' education, year in school, and the average academic values of black peers. These variables, used as controls, were entered into the analyses as covariates.

Table I-1 presents the results of these analysis. They show, first, that none of the three factors (class racial composition, friendship with whites, academic values of white peers) had an independent effect on the academic values of black peers or on the achievement scores of black lower-classmen. With respect to effort, only class racial composition had a significant, though weak, independent effect: as the proportion of blacks increased, black students' effort became lower. Grades were related significantly both to class racial composition and to friendship with whites. Grades among blacks rose as the proportion of blacks increased and also rose as friendship with whites increased.

The effects of class racial composition on academic outcomes for black students did not vary significantly with different amounts of friendship with whites or with different levels of academic values among white peers. Similarly, the effects of friendship with whites on black students' academic

values, effort, and achievement scores did not differ among those whose classes had different racial compositions or among those whose white peers differed in their academic values. However, the relationship between friendship with whites and grades did differ significantly for those whose white peers had different academic values.

Figure 1 shows the nature of this joint effect. When the academic values of white peers were low or medium, friendship with whites was associated only slightly and inconsistently with higher grades. But when the academic values of white peers were high, increased friendship with whites was linked more clearly to a gain in grades. Since having white friends and white peers with high academic values did not contribute to either the academic values or to the effort of black students, it is hard to attribute the higher grades of these blacks to the influence of white peers on their motivation. It may be that blacks with academically oriented white friends did obtain some practical assistance from the whites (e.g., used them as models for study methods). Another possibility is that black students who got good grades (for reasons other than interracial contact) were more likely than other blacks to want to be friends with academically-oriented whites and to be accepted by such whites.

The results shown in Table I-1 also show that there were no three-way interactions among class racial composition, friendship with whites, and the academic values of white peers, as these related to the academic values, effort, or achievement scores of black students. There was a small, significant three-way interaction with respect to grades. However, inspection of the cell means revealed no clear pattern of results.

We also conducted a supplementary series of analyses (not shown here) identical to those above, with the exception that an alternate measure of the

academic values of white peers was used. For these analyses, the average effort of white peers was used as a behavioral indicator of white values, instead of the expressed values of the whites. This alternative measure of the academic values of white peers had no significant effect on any of the academic outcomes for blacks. Nor were there any significant joint effects between the average effort of white peers and class racial composition or friendship with whites, or any combination of these two aspects of inter-racial contact.

Overall, our results provide very little support for the proposition that attending predominately white classes will have the most positive academic effects on blacks when the academic values of their white peers are high. One possible explanation for this generally negative finding is that other black students, rather than whites, may have been the most salient normative group for blacks - even for blacks in majority-white classes who had white friends.

To explore this matter, we conducted a further set of analyses, not presented in detail here, which related academic outcomes for black students to the single and joint effects of a) class racial composition; b) the average expressed values of white peers; and c) the average expressed values or black peers. These analyses indicated that the relation of class racial composition to black students' effort was related more consistently to the values of their black peers than to the values of their white peers. The relation of class racial composition to black students' effort, separately for those whose black peers valued academic success differently, is shown in figure 2. These results show that increases in the proportion of blacks in classes was associated with lower effort only among those blacks whose black peers had low academic values. A related analysis shows that

increasing proportions of blacks in classes was related to higher grades only for those blacks whose black schoolmates expressed high academic values.

It should be noted, too, that the expressed academic values of black students generally did not differ from those of white students, though the effort of whites generally was a little higher (Patchen, Hofmann and Davidson, 1976). These descriptive results are not consistent with the frequent assumption that the academic motivation of whites generally is substantially higher than that of blacks.

Relative Ability of White Peers. In a second set of analyses of covariance, we explored the impact of the relative ability of white peers on the academic performance of black students. The three factors used as predictors in these analyses were 1) class racial composition; 2) the student's own IQ; 3) the average IQ of white peers. Covariates in these analysis, used primarily as controls, were the student's own parents' education, sex, year in school, the average IQ of black peers; the average academic values of black peers; and the average academic values of white peers.[5]

Class racial composition was categorized in our standard way (0-35; 35-55; and 55-85 percent black). Students' own IQs were categorized as a) far below average (below 85); b) somewhat below the average (85 to 95); and roughly at, or above, average (above 95). The average IQ of white peers was divided into three categories so as to produce about equal numbers of groups in each category: a) below 100; b) 100 to 108; c) above 108.

Academic outcomes examined in these analyses include, as before, students' effort, grades, and achievement scores (the latter for Freshman and Sophomores). In addition, since relative ability has been postulated to affect students' expectancies of academic success, we included as a dependent variable the

student's expectancy of being able to complete the amount of education he wanted to have.[6] To hold constant the educational goal, we limited this analysis to those black students who said they wanted to complete a four-year college or go beyond (48 percent of the total black sample).

Table I-6 shows the results of this set of analyses. These results show that, as in the previous analyses reported, class racial composition had independent effects on black students' grades and effort. As the proportion of blacks in their classes increased, the grades of black students rose but their effort fell. Class racial composition did not have a significant effect on black students' expectancies of being able to go to college. Also, as in previous analyses, class racial composition did not have a significant impact on achievement scores.

As might be expected, student's own IQ scores had a strong effect on their achievement scores and also were related significantly to grades. However, black students' own IQs did not have significant effects on either their effort or their expectancies of being able to go to college.

The average IQ of white peers had a significant, though small, effect on black students' effort. Those whose white peers had the highest average IQs tried harder than other blacks. Having white peers with the highest average IQ also contributed significantly to higher achievement scores for the small number of black lower-classmen who had such white peers. However, the average IQ of white peers did not affect black students' grades or their expectancies of being able to go to college. There was little evidence of the expected joint effects of black students' own IQ level and that of their white peers. There were no significant joint effects of these two variables with respect to students expectancies of going to college, their effort, or

their grades. There was a significant interaction between blacks student's own IQ and the average IQ of white peers as these factors related to students' achievement scores. However, the call means do not provide a consistent pattern of results. Among black students with relatively high IQ's (over 95), achievement scores rose as the average IQ of their white peers rose from low (under 100) to medium (100 to 108), to high (over 108). Among blacks with low IQ's (under 85), achievement scores also rose, though only slightly, as the average IQ of white peers rose from low (at or somewhat above their own level) to medium (clearly above their own level). However, among blacks with medium (85 to 95), achievement scores fell as the average IQ of white peers rose from low (about their own level) to medium (above their own level).[7] Thus, the effect of black students' own IQ, relative to the average IQ of whites, was not consistent.

There were no significant joint effects between class racial composition and black students' own IQ, as these variables related to any of the academic outcomes. Nor was there much indication of joint effects between class racial composition and the average IQ of white peers, as these factors related to black students' grades and to their expectancies of being able to go to college. There was, however, a significant joint effect between class racial composition and the average IQ of white peers as these factors related to black students' effort. These results are shown in figure 3. Among those black students whose white peers had the highest IQs, effort did not decrease (in fact, it increased somewhat) as the proportion of blacks in their classes increased. But among those blacks whose white peers had moderate average IQs, effort fell when classes became predominately black; and among those whose white peers had the lowest average IQ, effort was low everywhere but in predominately white classes.

Class racial composition and the average IQ of white peers also had a statistically significant joint effect on achievement scores. However, inspection of the cell means revealed no consistent pattern of results. Finally, there were no significant three-way joint effects among class racial composition, student's own IQ, and average IQ of white peers, as these variables related to any of the academic outcomes.

Overall, the results of these analyses indicate that having white peers with high IQs tended to increase the effort of black students but that being in predominately white classes increased black effort only when the academic ability of their white peers was not high.[8] There was little support for the proposition that being in mostly white classes will benefit most those blacks whose initial academic ability is about equal to that of their white classmates. The results indicate, instead, that the black students' own ability level and that of their white peers have no consistent joint effects on academic outcomes for blacks. This may be due in part to the fact that grades often are not awarded in terms of relative performance (students may be judged by absolute standards or by their working to full capacity) and/or to a lack of knowledge by students about their relative standing and its significance for their later academic success. Thus, many black students appear to have maintained high espectations of going to college despite relatively low school performance (Patchen, 1975).

Relative Education of White Peers. In the next series of analyses, we investigated the proposition that the impact of interracial contact on academic outcomes for black students will depend on the relative social class level of the two racial groups. The following four factors were used as predictors in these analyses: 1) class racial composition (percent black, 0-34.9; 35.0-54.9; 55.0 - 85.0) 2) friendship with whites (those who

had any close white friends[9] and those who did not); 3) black students' own parents' education (less than a high school education and high school graduation or beyond); and 4) average education of parents of white peers (less than high school completion; approximately high school completion; more than high school education). Controls in these analysis (entered as covariates) were black students' IQ, sex, year in school, and the average education of the parents of black peers.

The results of these analysis are presented in Table I-2. These results show, first, as did the analyses concerning students' IQs, that class racial composition was related significantly to black students' grades (higher proportion blacks, higher grades). However, class racial composition was not related to academic values, effort, or achievement scores.

Friendship with whites was not related significantly to academic values or to achievement scores, but was related to effort and grades. Black students who had white friends showed greater effort and attained higher grades than those who did not have white friends. Neither the education of black students' own parents not the average education of parents of their white peers had significant independent effect on any of the academic outcomes.

Did the effects of interracial contact depend on the educational level of the families of black students or their white peers? The results show first, as in previous analyses, that the impact of class racial composition did not vary depending on whether or not black students had white friends. Nor did the effects of class racial composition, or of friendship with whites, or of any combination of these two factors, differ for black students whose parents were high school graduates as compared to those students whose

parents had less education. There was a weak statistically significant interaction between class racial composition and own parents' education, as these factors related to achievement scores; but inspection of the cell means showed no consistent pattern of results. However, the effects of interracial contact on academic outcomes for black students did vary with the educational level of the parents of white peers, either alone or in combination with the educational level of the black students' own parents. First, there was a significant interaction between class racial composition and the educational level of white peers' parents, as these factors related to the effort of black students.

The nature of the joint effect of these factors on black students' effort is shown in Figure 4. These results show that, among black students whose white peers came from families with low or medium education, as the proportion of blacks in their classes increased, effort decreased. However, among black students whom white peers came from families with high education (beyond high school), there was no decrease in effort as the proportion of blacks in their classes increased; there was, in fact, a slight increase in effort among those in majority-black classes.

There also was a significant three-way joint effect between class racial composition, the average education of the parents of white peers, and the education of black students' own parents, as these factors related to effort. The nature of this three-way joint effect is shown in Table II. These data show that black students in predominately black classes were less diligent in their schoolwork than were blacks in other settings only when a) the education of their own parents was low; and also b) their white peers came from families whose education was low or medium. Among black

students whose own parents were above the lowest educational level and whose white peers came from high education families, effort did not decline for those in predominately black classes.

Table II shows also that there was one category of black students among whom being in predominately black classes was associated with greater, rather than lower, effort. These were the blacks whose own parents had little education but whose white schoolmates came from high educated families. Many of these students attended a predominately black but also mainly academic high school which admitted only able students. Probably the selectivity of that school, as well as the positive academic norms there, rather than its being predominately black, accounted for the high effort of these black students.

Class racial composition and the average education of the parents of white peers also had a joint effect on black students grades. The nature of this joint effect is shown in figure 5. Among black students whose white peers came from families of either high or medium education, grades were higher for those in majority-black classes than for those in classes with smaller proportions of blacks. However, among black students whose white peers came from the most poorly-educated families, grades were lower for those in majority-black classes than for those in classes with fewer blacks. The joint effect did not vary for black students whose own parents' education was low as compared to those whose parents had more education.

There was another significant two-way interaction, between friendship with whites and the average education of white peers' parents, as these factors related to black students' grades. Inspection of the means (not shown here) indicates a somewhat inconsistent pattern of results. The association between friendship with whites and high grades was strongest

among those blacks whose white peers came from high-education families. Among those blacks whose white peers came from low-education families, friendship with whites had a positive, but weaker, association with grades. Among those blacks whose white peers came from medium-education families, more friendship with whites was not associated with higher grades.

Finally, there was a significant three-way interaction among class racial composition, friendship with whites, and the education of white peers' parents, as these factors related to the academic values of black students. Inspection of the cell means indicated that these results were not completely consistent but that academic values tended to be highest among black students whose classes were majority-white, who were friends with whites, and whose white schoolmates came from well-educated families. These were no other significant two-way or three-way interactions, and no significant four-way interactions among class racial composition, friendship with whites, parents' education, and the education of white peers parents, as these factors related to academic outcomes for blacks.

Overall, the results give only limited and inconsistent support to the proposition that greater contact with white schoolmates will benefit students most when the whites are from better-educated families than are the blacks. Rather, being in mostly-white classes appeared to increase black students' effort and grades only when both they and their white classmates came from fairly low-education families. We will consider possible explanations for these results in the concluding section.

Sex. In our next set of analyses, we explored the question of whether the effects of interracial contact on academic outcomes differed for black boys as compared to black girls. Two of the factors used in these analyses were class racial composition and friendship with whites, each trichotomized

as in previous analyses. The third factor was sex. The relationships between these factors and academic outcomes were controlled by IQ, parents' education, and year in school, which were included in the analyses as covariates.

These analyses (see Table I-3) show, as do other analyses, that class racial composition and friendship with whites had significant effects on effort and on grades but not on achievement scores. (Larger proportions of whites and more friendship with whites were associated with somewhat greater effort but with lower grades). Academic values were not related to class racial composition but were related significantly to friendship with whites in these analyses (more friendship, higher academic values).

Sex was related significantly to all of the academic outcomes. Black girls assigned greater importance to academic values, showed greater effort and got considerably better grades than black boys, though the boys got somewhat higher achievement scores than did the girls.

The effects of class racial composition on academic outcomes did not vary for black boys as compared to black girls. Nor did the effects of friendship with whites vary by sex. Also, as in other analyses, the effects of class racial composition did not vary for those with differing degrees of friendship with whites. There are statistically significant three-way interactions among class racial composition, friendship with whites, and sex, as these factors relate to grades and to achievement scores. However, inspection of the cell means shows no consistent pattern of results.

Overall, we may conclude that, although sex had a fairly substantial effect on academic outcomes among black students, the effects of interracial contact were not different for the two sexes.

Program. In another series of analyses, we investigated whether the relationship between interracial contact and academic outcomes varied for black students enrolled in various school programs (see table I-4). The factors used as predictors of academic outcomes included class racial composition and friendship with whites, as in previous analyses reported. The third factor was school program (Academic; General; Practical and Fine Arts (F.P.A.) and Vocational). [Students in the Vocational program were grouped together with those in the F.P.A. program because of the small number in the Vocational program and the fact that both programs emphasized specific interests of students, usually with an occupational orientation.]

Since only Juniors and Seniors were enrolled in programs, these analyses were limited to students in these school years. Also, since Juniors and Seniors had taken achievement tests prior to the year our interracial contact data were obtained, achievement scores were not analyzed as a dependent variable. Academic values, effort, and grades were the dependent variables. Control variables were IQ, sex, and parent's education (entered as covariates).

These analyses show, first, that with students' programs (as well as the covariates) controlled, neither class racial composition nor friendship with whites had a significant effect on academic outcomes for blacks. However, students in different programs did differ significantly with respect to all three academic outcomes examined: values, effort, and grades. Those in the Academic program were highest on all these criteria, those in the F.P.A. and Vocational programs were next, and those in the General program were lowest in all three respects.

While academic outcomes differed for black students in different programs, the effects of class racial composition and of friendship with whites (or of both combined) did not differ significantly for those in

different programs. However, there was a tendency for an increasing proportion of blacks to lead to lower effort among black students more in the General program than in other programs. [This interaction, short of the usual criterion of statistical significance ($p=.07$), reaches significance ($p<.05$) when friendship with whites is not used as a third factor]. The average effort scores among blacks in different programs, as the racial composition of their classes varied, is shown in figure 6. As classes went from majority-white to those with larger proportions of blacks, a substantial drop in effort occurred among blacks in the General program. Effort among black students in the Academic program declined only slightly as the proportion of blacks increased. The drop in effort among those in the F.P.A. and Vocational programs (combined) was intermediate.

Contact in Grade School. Our final set of analyses bears on the proposition that the effects of interracial contact in high school will depend on the amount of interracial contact which students had in grade school (see table I-5). The factors used as predictors of academic outcomes were a) the racial composition of students' high school classes (percent black, 0-34.9; 35.0-54.9; 55.0-85.0); and b) the racial composition of students' grade school classes (no whites; very few whites; quite a few whites; half or more whites). Control variables, entered as covariates, were parents' education and sex.

These analyses show that the racial composition of grade school classes had no significant effect on any of the academic outcomes: academic values, effort, grades or achievement scores. On the other hand, the racial composition of high school classes did have an impact on several academic outcomes. As in most previous analyses, having greater proportions of blacks in classes was associated with lower effort but with higher grades. In addition, this

series of analyses shows a significant association between class racial composition and achievement scores (greater proportion of blacks, lower achievement scores). However, it should be noted that IQ scores were not controlled in this analysis.[10]

There were no significant joint effects of the racial composition of grade school classes and of high school classes on any of the academic outcomes in high school. Thus, the hypothesis that the effect of interracial contact in high school varies with the amount of contact in grade school is not supported by our results.

It should be noted also that, with parents' education controlled, the IQ scores of black students (obtained toward the end of the grade school years) were not related to the racial composition of their classes in grade school (r=-.03). Similarly, IQ scores for blacks were not related to a measure of the amount of friendly contact they had with whites in grade school (r=-.03). Since IQ tests may be viewed as general achievement tests (measuring the acquisition of general intellectual skills), these results are consistent with those presented in table I-5 in indicating that interracial contact in grade school had little association with the academic performance of black students.

Variation in Outcomes Explained. Our discussion thus far has focused on whether the effects of interracial contact on academic outcomes (singly and jointly with other factors) are statistically significant. But though a factor may have an effect that is statistically significant (i.e., does not occur by chance), this factor may not explain much of the variation in the outcome.

Each section of Table I shows the proportion of the total variation among black students with respect to each academic outcome which is accounted

for by a) class racial composition, plus b) friendship with whites, plus c) all interactions of these factors with each other and with other factors in the particular analyses. [The amount of variation accounted for independently by other factors (e.g., IQ, sex) is not included.]

These results show that the proportion of total variation in each of the academic outcomes which is accounted for by the two interracial contact variables, plus their interactions with other factors, is modest. The highest proportions of explained variation for each outcome in any analysis is as follows: academic values, 6.2 percent; effort, 7.8 percent; grades, 10.6 percent; achievement scores, 7.9 percent (except for the one analysis where IQ was not controlled). These proportions of variation explained come mainly from the analyses (I-2) which included four factors and are partly the result of the addition of many trivial, non-significant interaction effects. The proportions of variation explained in most of the other analyses are even smaller. Thus, these results indicate that, even when both the amount and the quality of interracial contact are considered, along with specific conditions of contact, contact with whites does not have a major impact on academic outcomes among blacks.

Discussion

We have considered a variety of conditions which have been hypothesized to condition the relationship between class racial composition and the academic performance of black students. Support for all of these hypothesis has been found to be weak or absent.

Though there were isolated relationships in the expected direction, there was little overall support for the hypotheses that interracial contact will have more positive effects on academic outcomes of black students when

white peers have high academic values; when white peers come from well-educated families; or when the initial ability (IQ) of white peers is roughly equal to that of the blacks. The association between interracial contact and academic outcomes for blacks also did not differ significantly for those with differing amounts of friendship with whites; for those who attended grade schools with different racial compositions; or for boys as compared to girls.

Though the hypotheses which have been derived from the literature received little support, the results provide an interesting picture of the conditions under which class racial composition was related somewhat to academic outcomes - especially to effort - among black students. The racial composition of classes did not appear to have much impact on those black students whose peers (of either race) had high academic values or came from well-educated families. Among students with such peers, those in predominately-white classes did not show higher effort or have higher achievement scores than those in more heavily-black settings. If anything, blacks who had academically-oriented peers did better in classes with larger proportions of blacks - at least as judged by their grades.

However, being in predominately-white classes appeared to benefit those black students whose peers (of either race) were not academically oriented, or whose peers came from low-education families. Specifically, as the proportion of whites in their classes increased, effort rose among black students only when: a) the education of their own parents and the education of parents of white peers were low: b) the academic values of peers of their own race were low; and c) they were not in the Academic program.

These results are contrary to the general thinking in the literature that contact with white students will benefit black students because of the high academic values and middle class family background of white students. They indicate, instead, that for students whose peers have low academic values and/or are from low-education families, just being in predominately-white classes is beneficial - especially for effort.

Why should black students whose peers are not academically oriented try less hard when their classes are heavily black than when their classes are predominately white? Our results indicate that it is not because they have especially low academic values or especially low expectations of being able to go to college. It may be, rather, that their low effort is due to the way in which teachers handle students in such classes. It may be that when teacher confront classes which are both a) composed of students who are not academically oriented (usually those from poorly-educated families) and b) are about half or more black, they tend to have lower expectations of, and place fewer demands on, the students than they do when both of these circumstances are not present together. Another possibility is that disciplinary problems may tend to be most severe in those classes which are both heavily-black and have students who are not academically-oriented. These two possible causes may be related, since disciplinary problems (along with other factors, such as racial stereotypes) may contribute to teachers having low expectations of students and making few demands on them.

While class racial composition and friendship with whites do have some association with effort and with grades among black students, especially under the conditions discussed, the magnitude of the effect of interracial

contact on these outcomes is consistently quite small. Moreover, neither class racial composition, nor friendship with whites, nor any combination of the two, has much effect on black students' achievement scores, regardless of the other conditions considered.

Of course, while this paper has covered a variety of conditions which might affect the impact of interracial contact, there are other possible conditions which may be important. Some of these possibilities have been considered in other analyses not reported here. For example, we found that the impact of class racial composition did not differ significantly for black students who perceived varying amounts of discrimination against black students by the school staff. Yet there are other possible conditions that might be investigated and some of the same conditions we have examined should be reconsidered with other school populations and with other measures.

But granted all of these proper cautions about the decisiveness of our results, the present findings suggest the possibility that we may never find conditions under which interracial contact will produce dramatic gains in minority students' academic performance.

Racial integration in schools is desirable for a number of reasons, including preparing students of both races for living and working together in an increasingly integrated adult society. However, the present data suggest that we should not expect interracial contact to produce major academic benefits as well, regardless of the friendliness of the contact or the characteristics of the students involved. Efforts to improve student performance might focus more profitably on factors which are tied more closely, both theoretically and empirically, to student achievement. Our own results indicate particularly the importance of

the cognitive abilities which are measured by IQ tests. Rather than looking to racial integration as the major answer, efforts to improve minority achievement might focus on the early development of such cognitive abilities and on school programs and teacher methods that directly influence motivation and learning.

FOOTNOTES

1. See Patchen, 1975; Patchen, et al., 1977. Analyses for white students parallel to those for black students will be presented in later publications.
2. In the analysis shown in Table I, the effects of own and peers' ability are controlled by peers' values; the effects of peers' values is controlled by student's own ability, though not by peers' ability.
3. It should be noted that white friends were not necessarily found among those defined as white peers (see below), though this would tend to be the case.
4. Although blacks' grades generally rose as the proportion of blacks in classes increased, black grades fell off among those in classes which were 80-90 or over 90 percent black. And although effort generally was lower among blacks in heavily black classes, there was an upturn in effort among those in classes which averaged 90 percent or more black.
5. The average academic values of white peers and black peers were not used as covariates in the analysis of achievement scores. When this was attempted, singular matrices were produced and the computer could not perform the analysis of covariance.
6. In retrospect, it would have been desirable to have a measure of students' expectancies of getting good grades; unfortunately, we did not obtain such data.
7. No blacks with low IQs, and few blacks with medium IQs had white peers with high average IQ. Thus, not all possible cells in the analysis have enough cases to report.

8. When the same set of analyses was run without controls for the academic values of peers, average IQ of white peers had significant effect on grades and expectations of going to college (those whose white peers had the highest IQs had the highest grades and expectations). However, the interaction effects in these analyses were not much different from those shown in table I.

9. Having close white friends was defined as either being part of a bi-racial informal group or having a white as one of one's five best friends.

10. It was deemed unappropriate to control the effects of grade school racial composition by IQ in these analyses, since IQ (measured in grade school might have been affected by grade school racial composition. When IQ was controlled, in other analyses, there was no significant association between achievement scores and the racial composition of high school classes.

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Table I. Academic Outcomes for Black Students, as Related to Various Combinations of Class Racial Composition, Friendship with Whites, Students' Own Characteristics, and Characteristics of White Peers (f Values and Significance of Factors, From Analyses of Covariance)[a]

I-1. Contact and Peer Values	Effort	Grades[c]	Achievement Scores[b]	Academic Values
Covariates: IQ, Sex, Parent Educ., Year in School, Aver. Acad. Values, Black Peers				
A. Class Racial Composition (3)	4.1*	6.2**	0.6	0.4
B. Friendship with Whites (3)	2.3	5.7**	0.1	1.3
C. Aver. Academic Values, White Peers (3)	2.7	2.7	0.2	0.1
A X B	0.6	0.7	0.8	0.8
A X C	1.0	1.5	0.6	0.5
B X C	1.3	2.6*	0.4	1.0
A X B X C	1.5	2.2*	1.0	0.8
Percent Variation Explained by sum of A, B, C, and interactions.	.063	.088	.040	.033

*Indicates F ratio is significant at .05 level; ** significant at .01 level; *** significant at .001 level.

[a]Number in parentheses after each factor name is number of categories.

[b]Analysis for achievement scores was conducted only for freshmen and Sophomores. Total scores on battery of Metropolitan Achievement Tests were used.

[c]Current semester grades.

I-2. Contact and Parents' Education	Effort	Grades	Achievement Scores	Academic Values
Covariates: IQ; Sex; Year in School; Aver. Educ. Parents Black Peers				
A. Class racial composition (3)	2.0	11.4***	0.5	0.2
B. Friendship with Whites (2)	4,8*	11.9***	1.7	2.2
C. Own Parents' Education (2)	3.6	0.0	0.0	1.8
D. Aver. Educ. Parents' White Peers (3)	0.3	2.3	1.7	0.3
A X B	0.4	1.0	1.5	1.6
A X C	1.3	0.0	3.0*	1.1
A X D	2.6*	3.9**	1.0	1.0
B X C	0.1	2.2	0.0	0.2
B X D	1.3	3.4*	1.1	1.6
C X D	0.6	0.3	2.3	0.8
A X B X C	1.0	1.0	1.7	1.8
A X B X D	1.8	1.5	1.1	2.6*
A X C X D	3.3**	2.2	0.3	1.4
B X C X D	0.6	0.4	0.8	1.0
A X B X C X D	0.8	0.3	0.1	0.5
Percent of Variation Explained by sum of A, B, D and all interactions	.078	.106	.079	.062

I-3. Contact and Sex	Effort	Grades	Achievement Scores	Academic Values
Covariates: IQ, Parents' Education, Year in School				
A. Class Racial Composition (3)	3.1*	13.3***	1.9	0.4
B. Friendship w. Whites (3)	4.9**	10.4***	0.2	3.5*
C. Sex (2)	13.5***	27.7***	6.5	5.8
A X B	0.7	0.7	0.8	0.6
A X C	0.6	0.6	1.5	2.4
B X C	1.7	2.1	1.1	1.5
A X B X C	0.5	3.1*	2.6*	1.5
Percent variation explained by A, B and all interactions	.030	.071	.032	.029

I-4. Contact and Program	Effort	Grades	Achievement Scores	Academic Values
Covariates: IQ, Sex, Parents' Education				
A. Class racial composition (3)	0.7	0.7		0.1
B. Friendship with whites (3)	1.8	2.3	not analyzed for Juniors and Seniors	2.2
C. School Program (3)	11.5***	32.0***		11.8***
A X B	1.7	1.8		0.9
A X C	2.2	0.5		1.8
B X C	1.9	0.7		1.1
A X B X C	0.4	1.4		1.1
Percent variation explained by A, B, and all interactions	.048	.036		.046

I-5. Contact H.S. and Grade School				
Covariates: Sex, Parents' Educ., year in school				
A. H.S. Class racial composition (3)	3.4*	10.5***	7.2***	0.1
B. Grade Sch. Class racial comp. (4)	0.0	0.5	1.4	1.5
C. A X B	2.0	1.3	0.6	0.5
Percent variation explained by A, B and interaction	.019	.031	.060	.009

I-6. Contact and Ability	Effort	Grades	Achievement Scores[e]	Perceived Chance for Desired Education[d]
Covariates: Parent Educ.; Sex; Year in School; Aver. IQ, Bl. Peers[c]; Aver. Values, Bl. Peers; Aver. Values, Whi. Peers				
A. Class racial composition (3)	4.0*	6.3**	0.2	0.2
B. Student's Own IQ (3)	0.9	4.1*	38.4***	1.5
C. Average IQ, White Peers (3)	3.6*	2.1	3.5*	1.0
A X B	1.2	1.8	0.6	0.5
A X C	2.4*	0.5	2.9*	0.9
B X C	2.1	1.8	7.5***	1.1
A X B X C	1.2	0.9	1.2	1.5
Percent Variation Explained by sum of A, C, and all interactions	.067	.052	.139	.051

[d] Analysis of perceived chances was done only for those who wanted to go to a four year college or beyond.

[e] Average academic values of black peers and of white peers were not used as covariates in this analysis of achievement scores because a singular matrix for main effects and covariates appeared and computations could not be done.

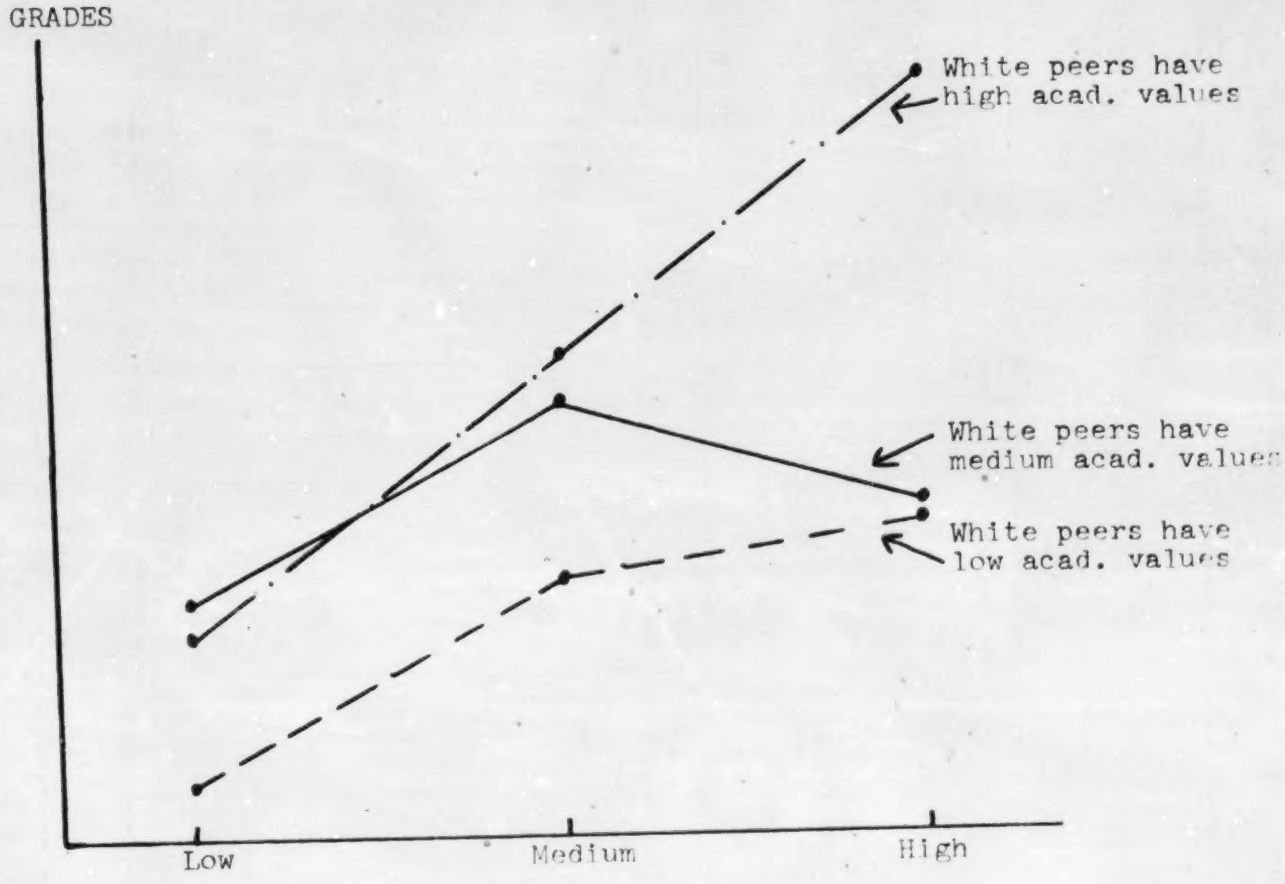
Table II. Effort of Black Students, As Related to Class Racial Composition, Separately for those with Different Combinations of Own Parents' Education and Education of Parents of White Peers.

Own Parents Education[a]	Aver. Education of Parents of White Peers[a]	Aver. Proportion of Blacks In Classes	N	Average Effort Score[b]
Low	Low	0-35	61	15.1
		35-55	87	12.8
		55-100	22	-8.3
Low	Medium	0-35	66	20.8
		35-55	11	8.0
		55-100	27	-0.5
Low	High	0-35	25	12.9
		35-55	42	12.8
		55-100	56	21.2
High	Low	0-35	48	19.4
		35-55	55	16.1
		55-100	19	15.9
High	Medium	0-35	83	18.1
		35-55	20	18.3
		55-100	14	14.5
High	High	0-35	53	18.5
		35-55	42	22.4
		55-100	75	19.4

[a]Own parents education was dichotomized into parents averaging less than completion of high school and those who completed high school or had more schooling. Average education of white peers was categorized at arbitrary cutting points to create equal numbers of peer groups in each category; those in the low category averaged less than high school completion; the medium group averaged close to high school completion; the high group averaged more than a high school education.

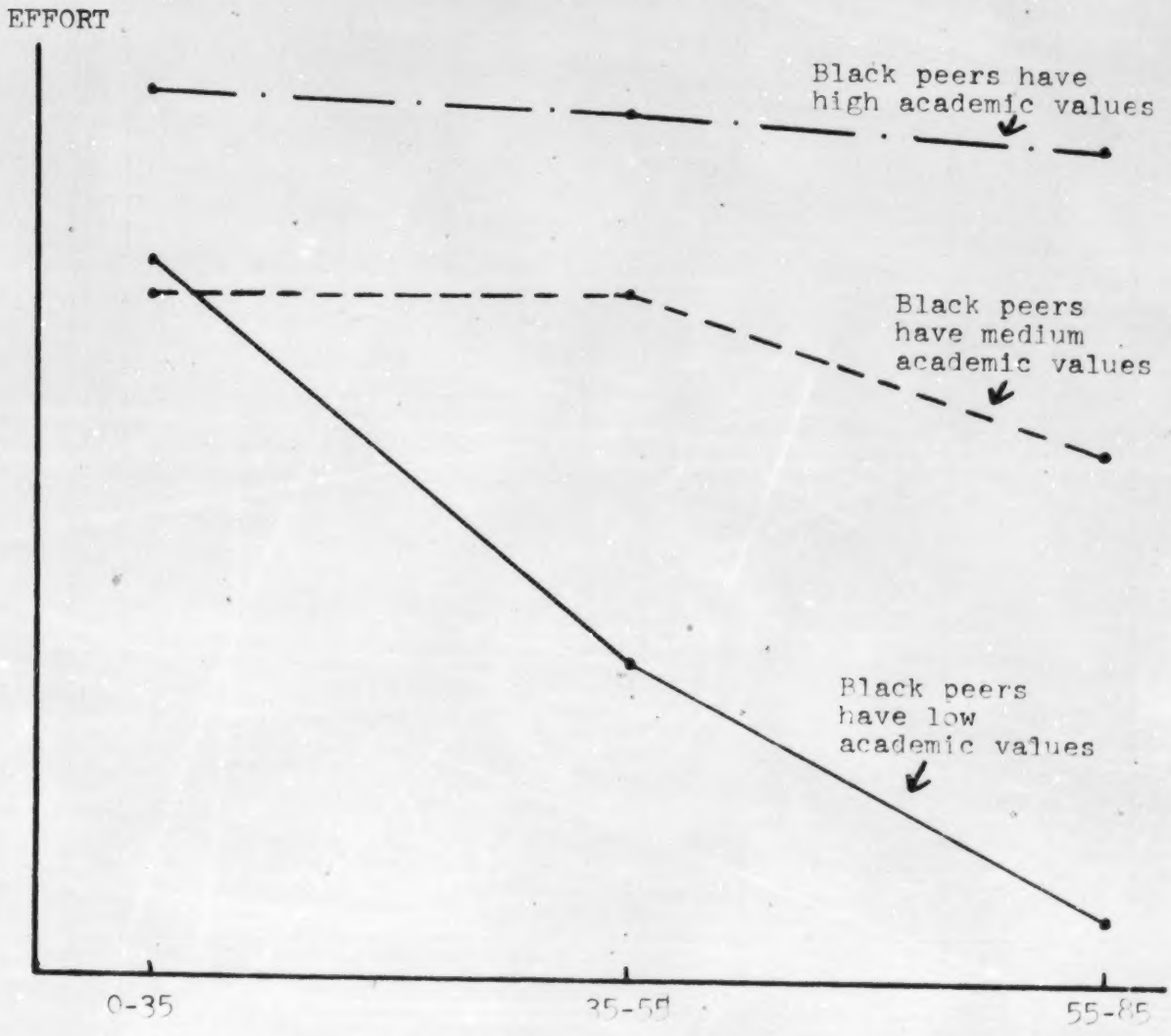
[b]Interaction of own parents' education, education of parents of white peers, and class racial composition is significant at .01 level in analysis of covariance in which friendship with whites is fourth factor and IQ, Sex, Year in School, and average education of parents of black peers are covariates.

Figure 1. Current-Semester Grades of Black Students, As Related to Friendship with Whites, Separately for Those Whose White Peers had Varying Levels of Academic Values.[1]



N. High Values	23	37	49
N. Med. Values	89	158	116
N. Low Values	104	158	138

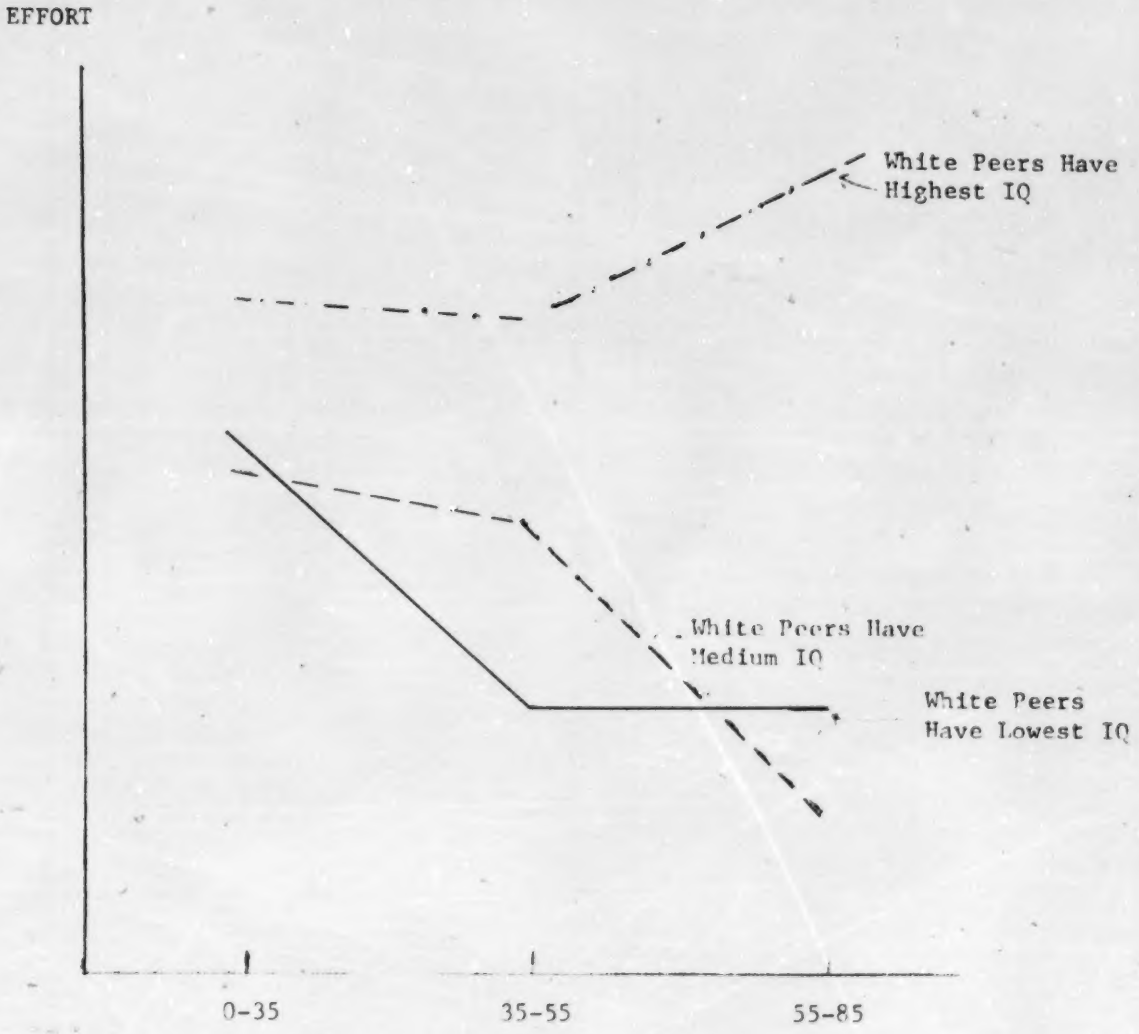
Figure 2. Effort of Black Students, As Related to Class Racial Composition, Separately for Those Whose Black Peers Had Varying Levels of Academic Values.[1]



N, High Values	101	71	116
N, Med. Values	70	95	33
N, Low Values	273	189	80

[1]Main effect of racial composition is significant at .05 level and main effect of black values is significant at .001 level: interaction is significant at .001 level. Results taken from analysis of covariance in which values of white peers was third factor and IQ, sex, parents' education, and year in school were covariates.

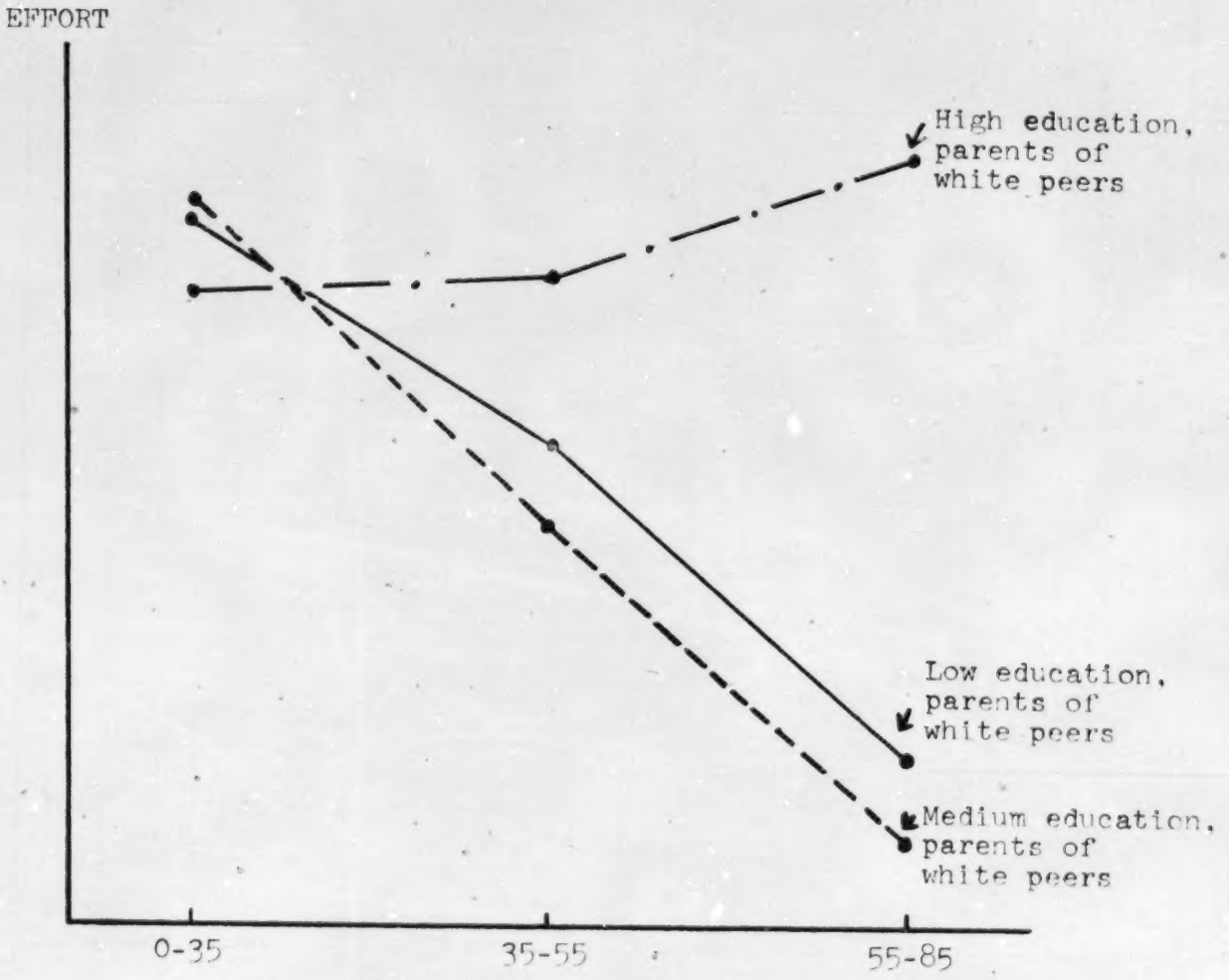
Figure 3. Effort, As Related to Racial Composition of Classes for Black Students Whose White Peers had Different Average IQ Levels.



Ns, High IQ	47	19	51
Ns, Med. IQ	165	158	57
Ns, Low IQ	169	133	76

[a]Main effects of class racial composition, of average IQ of white peers, and of interaction, are all significant at .05 level, in an analysis of covariance in which student's own IQ is third factor and parents education; sex; year in school; average IQ, black peers; average academic values, white peers; and average academic values, black peers are covariates.

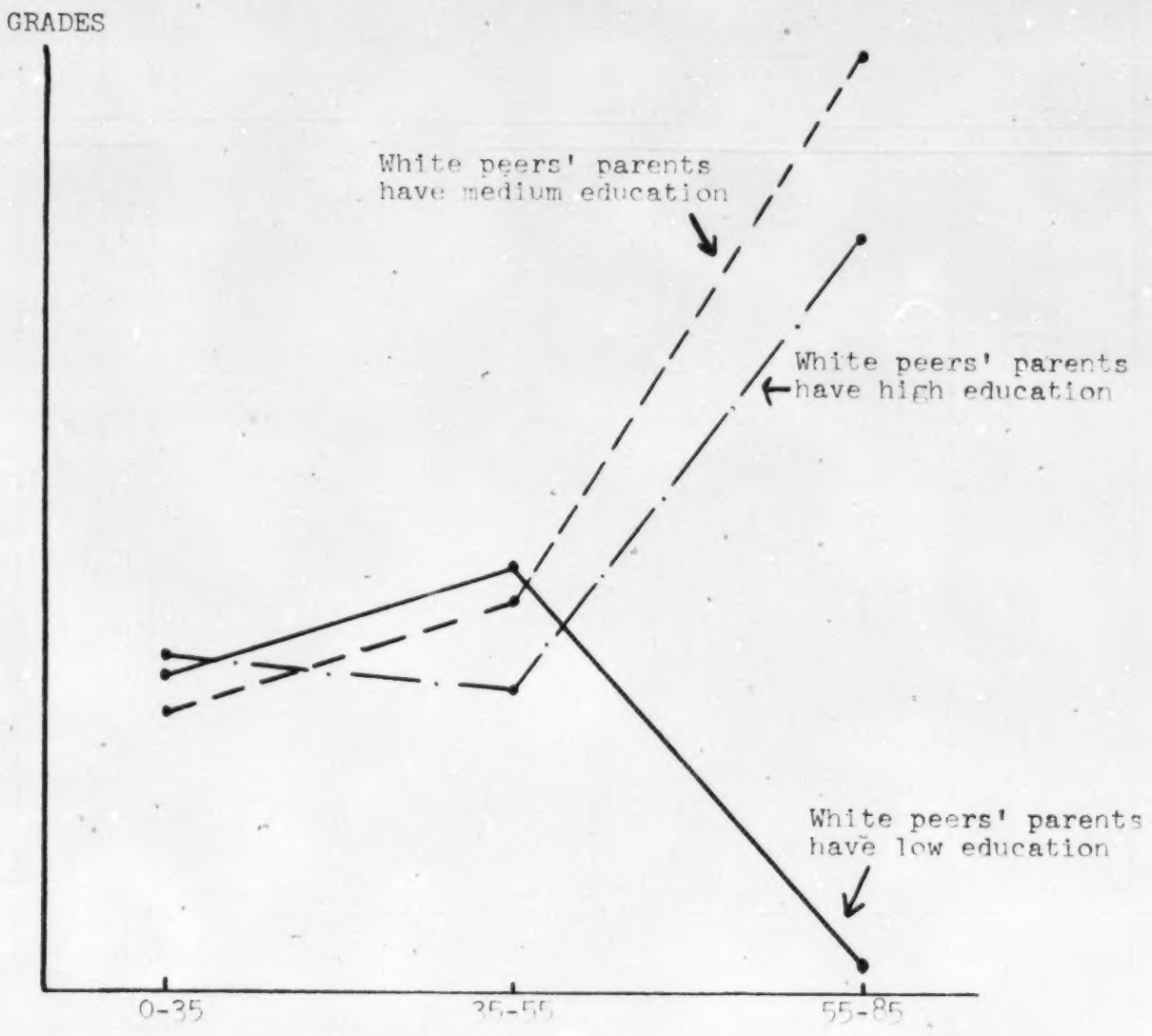
Figure 4. Effort of Black Students, As related to Average Percent Black in Classes, Separately for Those Whose White Peers Come from Families with Varying Levels of Education.[1]



N, White Par. Lo	131	171	52
N, White Par. Med	188	38	48
N, White Par. High	88	92	88

[1]Main effects of class racial composition and of education of parents of white peers are not significant but interaction is significant at .05 level, in analysis of covariance in which friendship with whites and own parents' education were other factors and IQ, sex, year in school, and average education of parents of black peers were covariates.

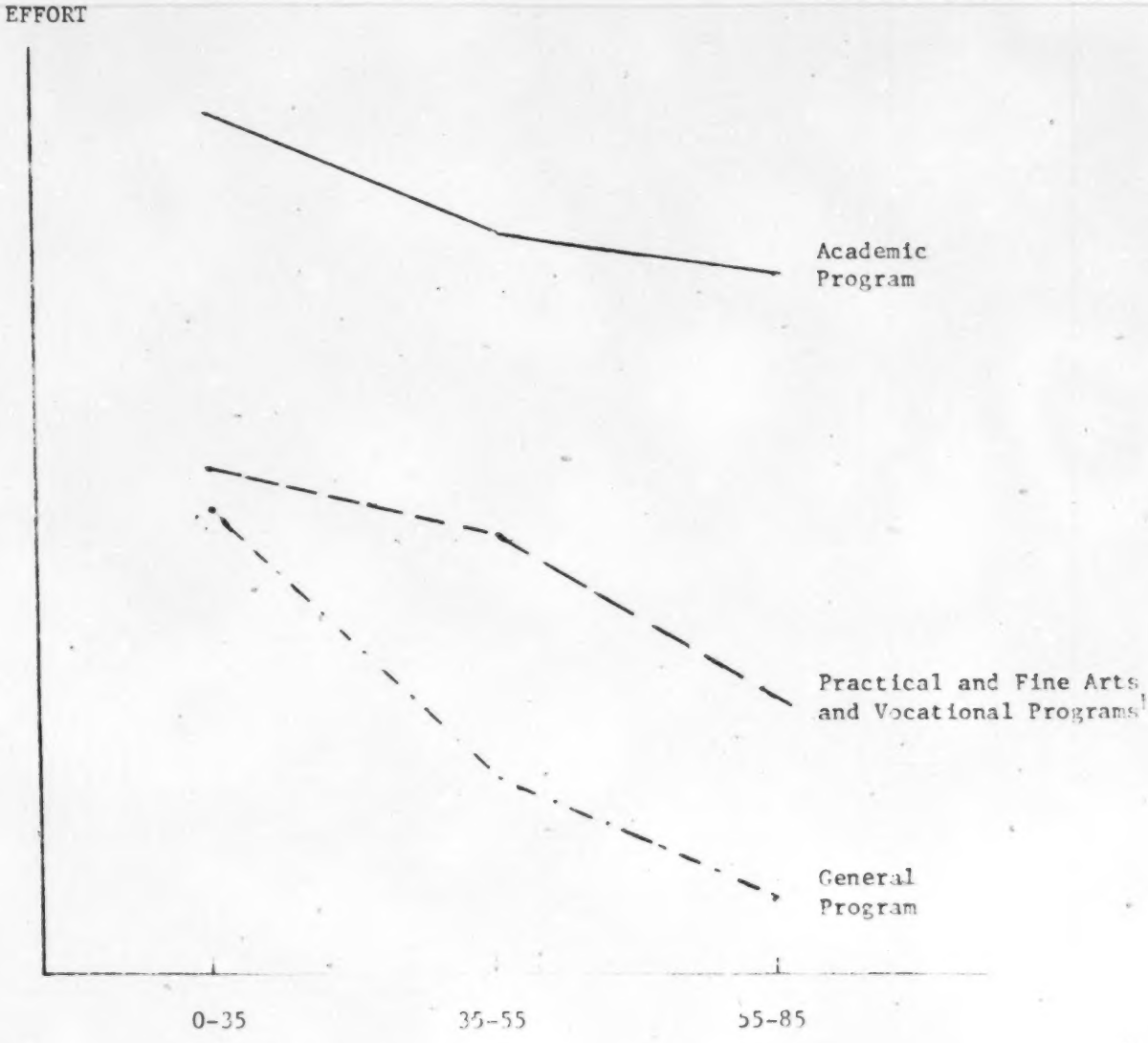
Figure 5. Grades of Black Students, As Related to Average Racial Composition of Classes, Separately for Those Whose White Peers Come from Families with Varying Education.[1]



Ns. Hi Educ.	80	92	91
Ns. Med. Educ.	193	42	48
Ns. Lo Educ.	130	163	52

[1]Main effect of class racial composition is significant ($p<.001$), main effect of white parents' education is not significant and interaction of these two factors is significant ($p<.01$) in an analysis of covariance in which friendship with whites and own parents' education are other factors, and IQ, sex, year in school, and education of parents of black peers are covariates.

Figure 6. Effort, As Related to Racial Composition of Classes, for Black Students (Juniors and Seniors) in Different Curriculum Programs.



Ns, Academic	100	66	78
Ns, FPA (Voc.)	149 (25)	102 (33)	65 (21)
Ns, General	234	280	147

[a]Main effect of school program is significant at .001 level, main effect of class racial composition is not significant, and interaction falls just short of significance (p=.07), in analysis of covariance in which friendship with whites is third factor and IQ, sex, and parents' education are covariates.

[b]When the results for Vocational students are graphed separately, the line falls between those for the FPA and General students.